



# Punjab Government Gazette

## EXTRAORDINARY

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### GOVERNMENT OF PUNJAB

PUNJAB WATER REGULATION AND DEVELOPMENT AUTHORITY

#### NOTIFICATION

The 27th January, 2023

**No. 75340/PWRDA-PWRD0GENL/37/2021-PWRDA-BR/418.-**

Whereas, the Draft Directions, titled the 'Punjab Guidelines for Ground Water Extraction and Conservation 2020,' issued by the Authority were published on the websites [www.irrigation.punjab.gov.in](http://www.irrigation.punjab.gov.in) and [www.punjab.gov.in](http://www.punjab.gov.in) and were thus made available to the public on the said websites.

And whereas, a notice was issued in accordance with the provisions of the sub-section 3 of Section 15 of the Punjab Water Resources (Management and Regulation) Act, 2020 in the newspapers, namely *The Tribune*, *Ajit* and *Jag Bani* on the 13<sup>th</sup> of November, 2020 inviting objections from all persons, likely to be affected, by 18<sup>th</sup> of December, 2020.

And whereas, the objections received have been considered by the Authority.

And whereas, the Government has approved the Groundwater Charges contained in these Directions under Section 17 (5) of the Punjab Water Resources (Management and Regulation) Act, 2020.

Now, therefore, in exercise of powers conferred under Section 15 (2) of the Punjab Water Resources (Management and Regulation) Act, 2020 and all other powers enabling it in this behalf, the Punjab Water Regulation and Development Authority hereby issues the following Directions:

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**CHAPTER 1****1.1 SHORT TITLE, COMMENCEMENT AND EXTENT**

- A. These Directions may be called the "Punjab Groundwater Extraction and Conservation Directions, 2023".
- B. These shall come into force from the first day of the month subsequent to the publication of the Directions.
- C. These shall extend to the whole of the State of Punjab.

**1.2 DEFINITIONS**

In these Directions, unless the context otherwise requires, -

- a) 'Act' means the Punjab Water Resources (Management and Regulation) Act, 2020;
- b) 'Agriculture' means agriculture and allied activities that are connected with agriculture such as agro-forestry, animal husbandry, dairy, poultry, fisheries, floriculture, nurseries, horticulture, poly-house and green-house cultivation, and such other activities as may be notified or specified by the Government;
- c) 'Annexure' means an Annexure appended to the Directions
- d) 'Applicant' means a person who makes an application to the Authority under the Directions;
- e) 'Directions' means the Punjab Groundwater Extraction and Conservation Directions, 2023;
- f) 'Extraction' with respect to groundwater shall mean to include the abstraction, drawing out, conveyance or transportation of groundwater through any means or equipment from below the surface of the ground to the surface or further to any place whether on the surface of the ground or otherwise, and shall include the drawing out of groundwater from a natural spring or artesian well. Extraction shall also include dewatering of sub-soil water that emerges onto the surface or onto dug contours involved in mining and infrastructure projects etc. It is clarified that an activity shall be considered to be Extraction even when it is not aided or supported by an energy source.
- g) 'Extraction Structure' means any structure which can be used in relation to the extraction of groundwater by any method or technology, and known by any nomenclature such as open well, dug well, bore well, dug-cum-bore well, tube well, step well, filter point, collector well, artesian well, spring, infiltration gallery, including any machinery, equipment and instruments used for the extraction of groundwater, as well as any combination or variation of such structures;
- h) 'Groundwater Charges' means all such charges as fixed by the Authority with the approval of the Government under Section 17(5) of the Act that relate to the extraction of groundwater or any activity connected therewith. Such Groundwater Charges, known by any nomenclature, shall include but shall not be limited to the following:
  - I. 'Groundwater Extraction Charges' being the charges levied on extraction of groundwater;

II. 'Application Fee' being a non-refundable amount to be paid along with various applications to be filed under the Directions; and

III. 'Non-Compliance Charges' being the charges fixed for contravention of the provisions of the Act, Rules, Regulations and the Directions, which may be known by any nomenclature including Groundwater Compensation Charges, other Non-Compliance Charges etc.;

i) 'Security Deposit' means such non-interest bearing, refundable amount as fixed by the Authority to be deposited with the Authority by the User;

j) 'Unit' means a premises, site or facility including a project, plant, building, structure, mine, plot, layout, colony, complex, infrastructure, construction site or land for which Permission is required or granted for the extraction of groundwater under the Directions;

**Explanation 1:** An Existing Unit is a Unit which has been extracting groundwater prior to the date of commencement of the Directions.

**Explanation 2:** A New Unit is a Unit which has not extracted groundwater before the date of commencement of the Directions.

k) 'User' means a person who undertakes any activity related to groundwater extraction or intends or seeks to undertake such activity, whether by itself or through an agent;

**Note:** The words and phrases used in the Directions that have been defined in the Act shall, unless the context requires otherwise, have the same meaning as defined therein.

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**CHAPTER 2****GROUND WATER CONSERVATION****2.1 PROMOTION OF WATER CONSERVATION**

- A. The main objective of the Directions is to improve the water balance by promoting and ensuring conservation of water by the Users. This objective will be achieved by ensuring that all Users permitted to extract groundwater shall pay volumetric Groundwater Extraction Charges and such charges shall be utilised in part for conserving water. In addition, the Users shall have the option of conserving water themselves with the approval of the Authority, and such Users (who conserve water) shall be entitled to Water-Conservation Credits as described in the Directions.
- B. A User may opt to implement water conservation measures with the approval of the Authority, either within the Unit or outside, whereupon such User shall be provided Water-Conservation Credits which will entitle it for a rebate in the Groundwater Extraction Charges.
- C. A portion of the Groundwater Extraction Charges will be utilised by the Authority for implementing Public Water Conservation Schemes through Departments or Agencies of the Government or Entities. These water conservation measures shall aim to improve the water balance by incentivizing the conservation of water by Users.

**2.2 PRIVATE WATER CONSERVATION SCHEMES PROPOSED AND IMPLEMENTED BY USERS**

A User may design and implement its own Private Water Conservation Scheme to enable it to earn Water Conservation Credits. Any such Water Conservation Scheme shall be submitted by the User along with all required information and data for approval to the Authority. In case the Authority approves the Scheme with such conditions as it deems fit, the User shall be eligible to earn Water Conservation Credits by implementing the Scheme to the extent of the volume of water that the User conserves in accordance with the parameters laid down in the Scheme. Water-Conservation Credits will be credited to the User only after inspection and/or verification of the Scheme as required by the Authority.

**2.3 APPROVAL AND MONITORING OF PRIVATE WATER CONSERVATION SCHEMES**

- A. The Authority shall scrutinise a private water conservation scheme submitted by a User and shall endeavour to convey its decision within a period of three months of the submission of the scheme complete in all respects. Incomplete submissions shall be returned to the User upon scrutiny. In case any additional documents, information, clarifications etc. are required the Authority shall communicate to the User within two months of submission, in which case the time period of three months for conveying a decision shall begin from the date that the User provides a satisfactory response to the Authority.

- B. A user will claim Water Conservation Credits only after approval of the Water Conservation Scheme by the Authority.
- C. Water Conservation Credits will be granted either from the date he has submitted the proposal complete in all respects to the Authority or from the date it starts conserving water whichever is later.
- D. The Conservation Credits earned by a User will be allotted to the User once a year and the time of such allotment shall depend on the nature of the conservation measures in the Scheme, the date of commencement of the Scheme and other relevant factors as may be determined by the Authority. After the Water Conservation Credits are claimed by the unit each year and approved by the Authority, the approved Water Conservation Credits will be credited over subsequent billing cycles.

Provided that the Water Conservation Credits in any billing cycle to be credited to the unit will not be more than the Groundwater Extraction Charges payable in that Billing Cycle.

Provided further that the maximum limit of the Conservation Credits which can be earned annually by a User shall be subject to the upper limit as mentioned in Table 4.3 of the Directions.

- E. The Authority may authorise a Person as a Conservation Appraiser to monitor, appraise and evaluate the execution, implementation, operation and maintenance etc. of any Water Conservation Schemes approved, to be approved or considered by it, including the schemes of rain water harvesting and waste water treatment and its use to reduce groundwater extraction. A User shall earn Water-Conservation Credits only after the concerned Conservation Appraiser submits to the Authority its assessment about the details of the volume of water conserved by the User as per the conditions, standards and parameters laid down in the Scheme and approved by the Authority. Till such assessment is approved by the Authority or by the Conservation Appraiser (if so authorised), the User shall continue to make payment of the entire Groundwater Extraction Charges at the applicable rates without claiming any rebate for conservation.

Non-Compliance of conditions contained in the approval of the Scheme may make the User liable for payment of Non-Compliance Charges.

- F. When a Water Conservation Scheme is implemented by a User outside its Unit then such scheme may be implemented in any Assessment Area (Block) which has the similar status (i.e. Orange, Yellow or Green) as the Assessment Area (Block) where the Unit is located. In case, the User chooses to implement the Scheme in another Assessment Area (Block) of different status then the User may locate its water conservation scheme as follows: -

A Unit located in an Orange or Yellow status Assessment Area (Block) may conserve water in any Assessment Area (Block) other than a Green status Assessment Area (Block), and a Unit located in a Green status Assessment Area (Block) may conserve water in any Assessment Area (Block) in the State.

**Explanation 1:** The water conservation rebate ceiling for a Unit shall be determined by the location of the Unit and not by the location of the Water Conservation Scheme.

**Explanation 2:** A contiguous Unit located in more than one Assessment Area (Block) shall be treated as located entirely in that Block which has the highest stage of groundwater development, and shall pay groundwater charges and may also claim water conservation credits as per the rates and norms defined for such Assessment Area (Block).

- G. A User must obtain approval of the Authority for any water conservation scheme that it intends to implement. A User that undertakes water conservation of its own accord without obtaining the approval of the Authority will not be entitled for any water conservation credits for such an activity.

#### **2.4 PRIVATE WATER CONSERVATION SCHEMES PUBLISHED BY AUTHORITY**

The Authority may also publish Private Water Conservation Schemes from time to time which may be implemented by a User or by a group of Users to avail Water-Conservation Credits. A User seeking to implement such a Published Scheme shall submit a specific proposal to the Authority with all required information and data. Such User shall obtain approval of the scheme from the Authority and implement the Scheme to the satisfaction of the Authority. Thereafter Water-Conservation Credits will be credited to the User in accordance with the approval and the standards and parameters of the Published Scheme.

#### **2.5 PRIVATE WATER CONSERVATION SCHEMES IMPLEMENTED COLLECTIVELY BY A GROUP OF USERS**

- A. Application may be submitted under Section 2.4 by a group comprising not less than five Users, which may collectively implement water conservation schemes outside their Units through an Association or a Special Purpose Vehicle (such SPV being a society, firm, company or association of persons etc.) jointly funded and managed by such group. In case of any change in members of the SPV/Association, intimation regarding the same shall be given within 15 days of the date of such change to the Authority and in case revised/new Permission is required, the same shall be applied for.
- B. Alternatively, such group of Users may outsource their Water Conservation Schemes to a service provider or organisation of their choice to implement the water conservation measures on their behalf.
- C. Approval of such Collective Water Conservation Schemes shall be obtained from the Authority, and the Authority shall be informed about the person(s) authorised to report the volume of water conserved and the apportionment of such conserved volume of water amongst the Units concerned.
- D. The water conservation activities undertaken by such group of Users shall be reported by a person duly authorised by such group to the Authority or to the Conservation Appraiser designated by the Authority.
- E. The water conservation credits shall be given to each User in the group as per the apportionment approved by the Authority. The Authority shall not be liable for any disagreements or disputes regarding the apportionment of water conservation credits amongst the Users.

**2.6 PUBLIC WATER CONSERVATION SCHEMES BY GOVERNMENT OR ENTITY**

- A. A Department or an Agency of Government or an Entity may design and implement a Public Water Conservation Scheme with the approval of the Authority.
- B. The Authority may direct a Department or Agency of the Government to implement a Public Water Conservation Scheme.
- C. Public Water Conservation Schemes prepared and to be implemented by the Departments or an Agency of Government or an Entity with the approval of the Authority may be funded by a User or a group of Users (as defined in 2.5 A) for execution and periodic maintenance.
- D. The Water Conservation Credits for such schemes as defined in Section 2.6 C shall be given as per the procedures laid down in the Directions.

**2.7 RAIN WATER HARVESTING**

If a User intends to implement or has implemented a rainwater harvesting scheme in a Unit, then such User may submit the requisite details of such rainwater harvesting scheme to the Authority for its approval. In the event that the Authority approves such rainwater harvesting scheme, the User shall be eligible for water-conservation credits as per the conditions of the approval.

**Note 1:** A User shall ensure that it obtains prior approval of the Competent Authority as required under the law for its Rain Water Harvesting Scheme.

**2.8 REUSE OF TREATED WASTE WATER**

- A. A User shall be responsible for ensuring the treatment of waste water as per the standards and requirements set by the concerned competent authority including the State Pollution Control Board. In the event that such treatment facilities or operations lead to the untreated or treated waste water (not complying with irrigation quality or standards as defined by the concerned Competent Authority) being collected in a water body or being used for irrigating a plantation, field or ground, then such measures shall not be considered for the purposes of a water conservation scheme by the Authority. Accordingly, a User shall not claim any water conservation credits for undertaking such measures.
- B. However, if as a result of implementing waste water treatment measures, the Unit is able to ensure that all the waste water discharged by it meets the specifications and standards set for irrigation-quality water (or higher standards such as drinking-quality water) by the concerned competent authority, then if any such treated waste water is reused for irrigation or other purposes conducive to the conservation of water then, such volume of reused waste water may be considered by the Authority for conservation credits, while approving such a water conservation scheme submitted by such User.
- C. Under special circumstances, a User who treats the waste water to standards pertaining to discharge into inland surface water and releases such treated water into a Surface water body, if so permitted by

the competent Authority, may be considered for being given partial water credits up to 50% of volume so treated and discharged.

## **2.9 IMPACT ASSESSMENT STUDIES BY THE AUTHORITY**

- A. In order to ensure sustainable ground water management and for designing and carrying out of effective Water Conservation Schemes, Impact Assessment studies are required.
- B. As the impact of groundwater withdrawal depends on the cumulative abstraction by various users in surrounding areas, the Impact Assessment Studies of individual units, may not reveal the impact of groundwater withdrawal on hydrogeological conditions of the aquifers and may not yield actionable results for preparation of accurate and beneficial Water Management Plans.
- C. Therefore, the Authority shall carry out Impact Assessment Studies. Priority will be given to study the over-exploited areas to get a meaningful picture of impact on the hydrogeological regime.

## **2.10 WATER CONSERVATION MEASURES APPROVED BY CGWA PRIOR TO THE DIRECTIONS**

If a User has already implemented a water conservation scheme prior to the commencement of the Directions with the approval of Central Ground Water Authority (CGWA), and applies for approval of such water conservation scheme, the Authority may while approving such scheme provide water conservation credits as determined by the Authority to such User either from the date of commencement of the Directions or such later date as determined by the Authority; provided that the NOC given by CGWA to such User was valid on the date of submission of the scheme to the Authority.

### CHAPTER 3

#### PERMISSION FOR GROUNDWATER EXTRACTION

##### 3.1 PERMISSION AND EXEMPTIONS

No User shall extract groundwater or conduct any activity connected therewith without obtaining Permission of the Authority except for the following cases:

- i. for Drinking and Domestic usage;

**Explanation:** A Unit shall be exempted under this clause only if the groundwater is utilized exclusively for Drinking and Domestic use.

- ii. for exclusive usage in Agriculture;
- iii. for use in a place of worship;
- iv. for a drinking and domestic Water Supply Scheme of Government;
- v. for use by an Establishment of the Military or of the Central Paramilitary Forces;
- vi. an Urban Local Body, Panchayati Raj Institution, Cantonment Board, Improvement Trust or Area Development Authority; and
- vii. a Unit extracting not more than 300 cubic metres of groundwater per month.

##### 3.2 APPLICATION FOR PERMISSION

An Application for Permission to extract groundwater shall be submitted to the Authority in the required format within the time stipulated, complete in all aspects, along with required documents, Application fees, Charges and Security Deposit etc. For details see the Authority's Website: [www.pwrda.org](http://www.pwrda.org).

##### 3.3 TIME PERIOD FOR EXISTING UNITS TO APPLY FOR PERMISSION

A User with an existing Unit shall apply to the Authority for Permission within the time period mentioned below from the date of commencement of the Directions.

**Table 3.1: Time Period for existing Units to apply for Permission from date of commencement of Directions**

	Volume of groundwater for which Permission is sought	Time Period
1	>15,000 cubic metres per month	Three Months
2	>1,500 to 15,000 cubic metres per month	Six Months
3	>300 to 1,500 cubic metres per month	Nine Months

**3.4 TIME PERIOD FOR NEW UNITS TO APPLY FOR PERMISSION**

No New Unit shall extract Groundwater without prior Permission of the Authority.

Provided that a New Unit may apply for permission within two months of commencement of the Directions even though it may have started extraction of groundwater prior to the date of application. Such User shall pay the groundwater charges from the date of extraction of groundwater.

**3.5 PROCESSING OF APPLICATIONS**

- A. On receipt of an application complete in all respects seeking Permission to extract groundwater, the Authority may after examining the application and the accompanying documents, and conducting on-site inspection if required, grant Permission for extraction of groundwater subject to such conditions and restrictions as it may impose.
- B. It shall be the endeavour of the Authority that Users who are found to be eligible for grant of Permission be granted the Permission within three months from the date of receipt of an application complete in all respects.
- C. In case the application is found to be incomplete, or in case any clarification, information or document is required, then the Authority shall inform the Applicant within a period of three months to complete the application or to provide such clarification, information, document etc. as may be required.
- D. The procedure for processing an application for Permission shall also apply to applications for renewal, revocation, extension, amendment or modification of Permission.

**3.6 PERMISSION BY WATER TANKERS**

- A. No motor vehicle shall be used for conveyance or transportation of groundwater through a water tanker (whether installed on the vehicle or towed as a trailer etc.) with a carrying capacity in excess of 500 litres for any purpose other than drinking and domestic or agricultural usage without Permission of the Authority.
- B. An application for Permission for operating an existing water tanker shall be submitted to the Authority within six months from the date of commencement of the Directions. If the Authority finds the application complete in all respects and after having satisfied itself that the applicant has complied with all the requirements of the Directions, the Authority shall grant the Permission, subject to such conditions and restrictions that the Authority may impose.
- C. Water Tankers owned and operated by a Department or Agency of the Government of India (including the Military or Central para-military forces) or of the Government of Punjab, or by an Urban Local Body, Panchayati Raj Institution, Cantonment Board, Improvement Trust or Area Development Authority shall not require Permission.

**3.7 PERMISSION FORA POWER-OPERATED DRILLING RIG**

- A. No power-operated drilling rig shall be operated for exploration of groundwater or for establishing, modifying, augmenting or improving any groundwater extraction structures in the state, without Permission of the Authority.
- B. An application for Permission to operate the power-operated drilling rig shall be submitted in the required format within six months from the date of commencement of the Directions. If the Authority finds the application complete in all respects and after having satisfied itself that the applicant has complied with all the requirements of the Directions, the Authority shall grant the Permission, which will be valid for 3 years, subject to such conditions and restrictions that the Authority may impose.
- C. A person operating a power-operated drilling rig shall keep a record of the borewells established, explored, excavated, modified, augmented or improved any groundwater extraction structures, by it anywhere in the state and shall communicate the same to the Officer as designated by the Government/Deputy Commissioner. Every person operating a drilling rig shall ensure that the instructions contained in the Order issued by Government of Punjab by its Memo no. 4/19/2009 PJ2/1684-1710 dated 15.07.2010 in pursuance of the Supreme Court order issued in CWP no. 36 of 2009 concerning the measures for prevention of fatal accidents of small children falling into abandoned bore wells or tube wells are duly complied with.
- D. The Department of Water Resources shall ensure that its instructions issued vide Memo no. 4/19/2009 PJ2/1684-1710 dated 15.07.2010 pertaining to prevention of fatal accidents of small children falling into abandoned bore wells or tube wells are complied with by all concerned.

**3.8 REFUSAL OF PERMISSION**

The Authority may refuse Permission for groundwater extraction for any reason to be recorded in writing including the following:

- i. That a User has been fraudulent or has suppressed or mis-represented any facts;
- ii. That a User has failed to supply all the required information;
- iii. That Permission Granted to a User will be against public policy or will not be in accordance with the Objectives of the Act.

When Permission is refused, the reasons for such refusal shall be communicated to the User.

**3.9 VALIDITY OF PERMISSION**

Permission shall, unless cancelled or revoked earlier, be valid for a period of three years from the date on which it is granted.

**3.10 AMENDMENT TO PERMISSION**

- A. The Authority may, for reasons to be recorded, amend the Permission whether by varying, deleting or adding conditions of Permission, or by amending the period of validity of the Permission, or by any other means, after giving a notice of at least seven days to the affected person, affording an opportunity to file objections.
- B. A User may apply for amendment to an existing Permission. A User who intends to extract groundwater higher than the permitted volume, shall apply in advance for amendment of the Permission for increasing its volume of extraction. Revised Permission may be granted in such a case for the increased volume, on payment of application fees and increased security deposit as applicable, and subject to amended conditions of Permission including conditions pertaining to installing equipment and water meters etc. as required.
- C. A User with valid Permission for groundwater extraction shall not install any additional Extraction Structure without the permission of the Authority.
- D. If a User requires to make an alteration or modification to any Extraction Structure, it shall intimate to the Authority in the required format within 30 days of starting the process of such alteration or modification:

Provided that if such activity is likely to result in an increase in groundwater extraction beyond the volume permitted then the User shall neither make any such alteration or modification nor extract any groundwater in excess of the permitted volume without obtaining prior Permission of the Authority.

**3.11 RENEWAL OF PERMISSION**

- A. A User shall apply for renewal of Permission in the required format prior to the expiry of Permission.
- B. While renewing Permission, the Authority shall satisfy itself that conditions of Permission have been complied with.
- C. If the Authority does not communicate with the Applicant or User within a period of three months from the date of receipt of the application for Renewal of Permission complete in all respects, then the renewal will be deemed to have been granted as applied for.

**3.12 REVOCATION OF PERMISSION**

The Authority may revoke a Permission on an application by the User in the required format.

**3.13 SUSPENSION OF PERMISSION**

The Authority may, for reasons to be recorded suspend a Permission with immediate effect, for a period not exceeding three months, if it has reason to believe that the User has violated any condition of Permission, or has failed to comply with any direction of the Authority.

Provided that within 7 working days of such order of suspension, the Authority shall issue a Notice of 15 days to the User to show cause why the suspension order may not be confirmed and the Permission may not be cancelled.

### **3.14 CANCELLATION OF PERMISSION**

In the event that a User has obtained Permission by fraud or suppression or mis-representation of facts, or fails to comply with any condition of the Permission granted, or fails to comply with any direction of the Authority, then in addition to any other action that the Authority may take in this regard as per law, the Permission granted may be cancelled after issuing a notice of not less than fifteen days, affording an opportunity of being heard to such User.

### **3.15 PERMISSION OBTAINED FROM CENTRAL GROUNDWATER AUTHORITY**

In case a User has obtained a No Objection Certificate (NOC) of the Central Groundwater Authority (CGWA) prior to the date of commencement of the Directions and such NOC has not expired on such date of commencement, then such NOC shall be considered for the purpose of granting Permission by the Authority:

Provided that such User shall be bound by all the conditions of the Directions and shall comply with the same from the date of commencement of the Directions.

### **3.16 OTHER REGULATORY CLEARANCES**

The permission accorded by the Authority for extraction of groundwater is limited to the purposes of the Act and it cannot be the basis of, or ground for, any other regulatory clearance (known by any nomenclature including No Objection Certificate, permission, sanction, authorisation, registration, certificate, etc.) that the User may require under any law. Further, this permission is not a substitute for any such regulatory clearance and it is entirely the responsibility of the User to obtain all such clearances and to comply with the same at all times.

### **3.17 CONSTRUCTION OF GROUNDWATER EXTRACTION STRUCTURE**

After six months from the date of commencement of the Directions, no User shall engage a power-operated drilling rig other than that permitted by the Authority for exploration of groundwater or for establishing, modifying, augmenting or improving any groundwater extraction structure.

### **3.18 SEALING OF ABANDONED OR DEFUNCT GROUNDWATER EXTRACTION STRUCTURE**

- A. Every abandoned or defunct groundwater extraction structure shall be kept sealed at all times.
- B. A User shall ensure proper sealing with cement grouting of every abandoned or defunct tube well, dug well or other extraction structure within seven days of its abandonment or becoming defunct.

The User shall submit a report including photographs to this effect to the Authority within a further period of seven days of having sealed the extraction structure.

### **3.19 GROUNDWATER QUALITY REPORT**

Existing Units seeking Permission for extraction of a volume Groundwater (other than Brackish/Saline water) more than 15,000 cubic metres per month shall submit a Chemical Analysis Report of water of each extraction structure provided by a NABL-accredited laboratory (as per IS-10500:2012) for the parameters as described in the Application Form. This report should not be older than six months on the date of Application. New Units granted permission to extract more than 15,000 cubic metres per month of groundwater shall provide this report within 6 months of grant of permission.

**CHAPTER 4****GROUNDWATER CHARGES****4.1 GROUNDWATER CHARGES**

- A. A User not exempted under the Directions, shall pay Groundwater Charges as applicable for the extraction of groundwater.
- B. Groundwater Charges are exclusive of taxes.
- C. The status (Green, Yellow, Orange) of Assessment Areas (Blocks) has been defined keeping in view the status of groundwater development of each Assessment Area (Block) as described in Annexure 1. Groundwater Charges have been levied at different rates for different Assessment Areas (Blocks) with a view to balance the demand for water on the one hand, and the requirements of ecological sustainability on the other hand, so as to achieve the overall objective of improving the water balance.
- D. A user shall pay the Groundwater Charges applicable to the assessment area (Block) in which the unit is located.
- E. If a unit falls in more than one Assessment Area (Block), the Groundwater Charges shall be calculated on the basis of the rates defined for the Assessment Area (Block) with the highest stage of Groundwater Development; irrespective of the location of extraction structures.

**4.2 APPLICATION FEES FOR VARIOUS APPLICATIONS**

An application under the Directions shall be made on payment of Application Fees (non-refundable) as given in the Table below:

**Table 4.1:** Application Fees (in Rupees)

S. No.	Nature of Application	Groundwater Extraction by Unit (cubic metres per month)			
		Upto 1,500	> 1,500 to 15,000	> 15,000 to 75,000	> 75,000
1	2	3	4	5	6
1	Permission, Renewal of Permission or Amendment in volume of water extraction	1,000	2,500	10,000	50,000
2	Correction, Name Change in the Permission granted	500	1,000	2,500	5,000
3	Revocation, Transfer or Amalgamation of Permission	500	1,000	2,500	5,000
4	Registration of Extraction Structure, or Modification thereof;	500	1,000	5,000	10,000
5	Permission for Drilling Rig, Renewal or Amendment	10,000			
6	Permission for Water Tanker, Renewal or Amendment	2,500			

**Explanation 1:** If a User seeks amendment of Permission for an increase in the volume of groundwater extraction, then it shall pay the Application Fees applicable to the total volume applied for.

**Explanation 2:** If a Drilling Rig or Water Tanker applies for any of the services listed at serial numbers 2 or 3 in the Table, it shall pay an amount equivalent to the stipulated Application Fee for a volume of groundwater extracted between 1,500 to 15,000 cubic metres per month as per column 4 of the above table, for each such Rig or Tanker.

#### 4.3 SECURITY DEPOSIT

- A. The Security Deposit shall be equivalent to two months of Groundwater Extraction Charges for the permitted volume.

**Explanation:** The Security Deposit will be calculated on the basis of the rate of Groundwater Extraction Charges (exclusive of water conservation credits) as applicable. The Security Deposit shall not be reduced in case the Unit is eligible for any water conservation credits.

- B. The Security Deposit may be refunded to the User after settling all accounts in case the Permission is refused or revoked or cancelled by the Authority.
- C. No interest shall accrue on the Security Deposit.

#### 4.4 CHARGES ON GROUNDWATER LEVIED BY OTHER ENTITIES

Certain Entities in the State including Urban Local Bodies, Panchayati Raj Institutions, Government Departments, Cantonment Boards, Urban Development Authorities, Improvement Trusts and Water Users' Associations may be levying a charge on groundwater extracted by users whether known by any name such as a tax, tariff, rate, fee, or cess.

The Groundwater Charges contained in the Directions are in addition to, and completely distinct and separate from, any such tax, tariff, rate, fee, or cess levied by the concerned Entity under the applicable law. A User shall be responsible for paying the Groundwater Charges under the Directions irrespective of any such tax, tariff, rate, fee, or cess etc. levied or collected by an Entity.

#### 4.5 REBATE DUE TO COVID 19 EPIDEMIC

A rebate of 20% has been given on Groundwater Extraction Charges deposited by the User under the Draft Guidelines 2020 till 31<sup>st</sup> July, 2021. Therefore the Water Conservation Credits, if any, earned by such User till July 31<sup>st</sup> 2021 will also stand reduced by 20%.

**4.6 CHARGES FOR GROUNDWATER EXTRACTION**

A. Groundwater Extraction Charges shall be volumetric that is to say, they shall be based on the volume of groundwater extracted. The volume of groundwater extracted shall be measured as required by the Directions or otherwise by the Authority.

B. Groundwater Extraction Charges will be levied for each Cubic Metre of groundwater extracted by a Unit in a month as per the slabs shown in the Table 4.2 below:

**Table 4.2:** Groundwater Extraction Charges\*\* (Gross)

Status of Assessment Area*	Volume of Groundwater extracted (cubic metres per month)				
	Up to 300	> 300 up to 1,500	> 1,500 up to 15,000	> 15,000 up to 75,000	Above 75,000
	Charges in Rupees per cubic metre				
GREEN	0	4	6	10	14
YELLOW	0	6	9	14	18
ORANGE	0	8	12	18	22

\*Status of Assessment Area (Block) is described in Annexure 1.

\*\* Charges exclude taxes

**NOTE:** It is clarified that these slab rates shall apply to all Units irrespective of the volume of groundwater extracted by them. This is illustrated in the Example below.

**Example: Calculation of monthly Ground Water Charges**

*Calculation of Ground water charges to be paid if a unit located in Orange Zone, extracts 35,000 m<sup>3</sup> of Ground Water in a month and does not undertake any water conservation activity.*

S No.	Description		
1	Volume of Water Extracted in a month	35,000 m <sup>3</sup>	
2	Assessment area	Orange	
3	Ground Water Charges Payable without any water conservation		Amount (in Rs.)
		i. Up to 300 m <sup>3</sup>	= 0
		ii. >300-1500 m <sup>3</sup> @ Rs. 8 x 1200	= 9,600
		iii. >1500-15000 m <sup>3</sup> @ Rs. 12 x 13500	= 1,62,000
		iv. >15000-35000 m <sup>3</sup> @ Rs. 18 x 20000	= 3,60,000
		<b>Total</b>	<b>= 5,31,600</b>

#### 4.7 WATER CONSERVATION CREDITS

A Unit that extracts a volume of groundwater exceeding three hundred cubic metres per month will be entitled for water conservation credits for the water conserved by it under a scheme approved by the Authority. Each cubic metre of water conserved will earn one Water Conservation Credit which will entitle the Unit to a rebate of Rupees 2.50. However, this rebate will be available to a Unit for each slab as depicted in Table 4.3 below. In case a Unit saves water beyond this limit then no additional rebate shall accrue. The limit on the rebate will vary according to the status of the Assessment Area (Block) in which a Unit is located as described in Annexure 1. The upper limit for water conservation up to which water conservation credits can be earned by a Unit shall be as mentioned in Table 4.3 below.

**Table 4.3:** Water Conservation Limits for earning credits

Status of Assessment Area	Volume of Groundwater extracted (cubic metres/Year)			
	>3600-18000	>18000-180000	>180000-900000	>900000
	% of groundwater to be conserved for maximum rebate			
Green	50%	100%	150%	200%
Yellow	100%	150%	200%	250%
Orange	150%	200%	250%	300%

**Example:** A Unit situated in Orange Zone extracting 25,000 cubic metres per month (300,000 cubic metres per year) can earn maximum water conservation credits per annum as follows:

No rebate for first 3,600 m<sup>3</sup>

For 3,600 to 18,000 cubic metres i.e. 14400 m<sup>3</sup> @ 150% = 21,600 cubic metres

For 18,000 to 1,80,000 cubic metres i.e. 162000 m<sup>3</sup> @ 200% = 3,24,000 cubic metres

For balance 1,20,000 cubic metres @ 250% = 3,00,000 cubic metres

Total Volume that can be conserved to avail maximum water conservation credits = 6,45,600 cubic metres.

Maximum Rebate is 645,600 x 2.50 = Rs 16,14,000 per annum

**Note:** No Water Conservation rebate will be available for Units extracting groundwater up to 300 cubic metres in a month.

**4.8 BILLING CYCLE AND PAYMENT SCHEDULE**

- A. Groundwater extraction charges shall be paid by the User on a self-assessment basis in accordance with the self-recorded and reported water meter readings. In addition, the Authority may verify the water meter readings either periodically or at any time.
- B. Groundwater extraction charges shall be paid on a monthly basis.
- C. A User shall convey the water meter readings of the last working day of the month to the Authority by the 10<sup>th</sup> day of the ensuing month and shall make payment of the Charges by the 20<sup>th</sup> day of the month.

**Note:** Water meter readings shall be conveyed by a User as per schedule even if no groundwater extraction occurs in a billing cycle.

- D. For the period from the date of commencement of the Directions up to date of submitting the Permission application or up to the date of installation of required water meters (whichever is later), an existing User shall pay groundwater charges for the entire volume of groundwater for which Permission is sought. In case the User is granted Permission for a different volume of groundwater than applied for, then the difference in payment, if any, will be paid by the User or adjusted in future bills as the case may be.
- E. A User not applying within the stipulated time period, shall be liable to pay all applicable Non-Compliance Charges

**4.9 FAILURE TO PAY IN TIME**

- A. Failure to make any payment of Groundwater Charges in full and in time or failure to convey Water Meter readings within the stipulated time period, by a User shall be sufficient cause for the Authority to take action for default, including but not limited to imposition and recovery of Non-Compliance Charges as applicable.
- B. Notwithstanding anything in the sub-paragraph above, if the User fails to deposit the groundwater charges for three consecutive billing cycles, then the Permission granted to the User maybe suspended in terms of the Directions.

**4.10 CHARGES FOR GROUND WATER EXTRACTION WHICH ENTAILS CONVEYANCE OR TRANSPORTATION THROUGH WATER TANKERS**

- A. The following Groundwater Conveyance Charges shall be paid for conveying, transporting, supplying or delivering groundwater for usage other than drinking and domestic or agricultural or

fire-fighting. These charges shall be paid irrespective of the groundwater charges, if any, payable by the owner or operator of the extraction structure.

**Table 4.4** Ground Water Conveyance Charges

S.no	Category of Assessment Area	Rupees per cubic metre
1	Orange	20
2	Yellow	16
3	Green	10
<b>Note:</b> The charges shall apply as per the location of groundwater extraction structure.		

B. Groundwater Conveyance Charges shall be payable from the commencement of the Directions.

C. The Groundwater Conveyance Charges shall be calculated on the basis that the water tanker carries its full capacity and makes twenty trips in a month as per the following formula:

**20 (Trips) x Capacity of Tanker in cubic metres x Rate given in Table 4.4**

D. The monthly payment shall be made by the 10<sup>th</sup> day of the ensuing month.

#### **4.11 EXTRACTION OF BRACKISH/SALINE GROUND WATER**

- A. Extraction of brackish/saline ground water in a pocket where the aquifers at all levels up to 300 metres depth contain only brackish/saline ground water will be permitted on payment of only 25% of the applicable Groundwater Charges. No water conservation credits shall be available in such a case. A User seeking Permission for extracting more than 1,500 cubic metres of brackish/saline groundwater per month shall submit a hydro-geological report as per format required by the Authority detailing the contours of the brackish/saline aquifer and its potential, and an assessment of the risk of mixing of good quality water due to extraction of brackish/saline water. Such hydro-geological report shall cover a radius of 2 kilometres around the Unit. Further, the User shall obtain a report of a NABL-accredited laboratory regarding the quality parameters of groundwater extracted or to be extracted by the Unit and such test report will be considered before deciding whether to grant Permission to a Unit to extract groundwater in such an identified pocket.
- B. A User which extracts saline/brackish water shall comply with all conditions of environmental clearance (if applicable) as regards the extraction, treatment, disposal and re-use of such water. In case the User is not required to obtain environmental clearance then the Authority may impose such conditions as it may deem fit for the treatment, disposal and re-use of such water.

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**4.12 DE-WATERING**

A User that undertakes de-watering shall comply with all conditions of environmental clearance (if applicable) as regards the treatment, disposal and re-use of such water. In case the User is not required to obtain environmental clearance then the Authority may impose such conditions as it may deem fit for the treatment, disposal and re-use of such water.

## CHAPTER 5

### MONITORING OF GROUNDWATER EXTRACTION

#### 5.1 METERING OF GROUNDWATER EXTRACTION

- A. A User requiring Permission for groundwater extraction under the Directions shall install volumetric water meters on each extraction structure. All water meters shall conform to the technical specifications, performance parameters and connectivity standards etc. as required by the Authority. It shall be the responsibility of the User to ensure that each water meter including the telemetry device (if required) is fully functional and in proper working order at all times.
- B. A User shall install a water meter at each extraction structure depending on the volume of groundwater permitted to be extracted by the Unit as follows:

**Table 5.1:** Type of Water Meter

Permitted Volume of Groundwater Extraction	Type of Water Meter
Up to 1,500 cubic metres per month	Mechanical meter or Digital flow meter with or without telemetry
More than 1,500 cubic metres per month	Digital Flow Water Meter with Telemetry

**Explanation:** The type of water meter required to be installed will depend on the total volume of groundwater extraction permitted to the Unit and not on the volume extracted by each individual extraction structure. For example, if a Unit has three tube wells and has obtained Permission to extract 3,000 cubic metres of groundwater per month, then it shall install a digital water meter with telemetry at each of the three tube wells irrespective of the fact that a particular tube well may extract less than 1,500 cubic metres of groundwater per month.

- C. A User shall install the required water meters within three months of the date of Permission. For the period (within the time limit of three months) that the Unit extracts water without installing Water meters as required, it shall pay groundwater extraction charges for the entire volume permitted.
- D. In case more than one User obtains groundwater from an extraction structure then only the User within whose Unit the extraction structure is installed, or in case such structure is installed in a common area then the User who operates and maintains such structure, shall be required to apply for Permission and such User shall be exclusively and solely responsible for paying the entire Extraction Charges and for complying with all conditions of Permission.

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## 5.2 MEASUREMENT OF GROUNDWATER LEVELS

A Unit permitted ground water extraction exceeding 15,000 cubic metres per month shall monitor the groundwater level digitally through a piezometer. Only one piezometer will be required for a Unit irrespective of the number of extraction structures. The details of the piezometer shall be as follows:

- a. If feasible, it should be located at a horizontal distance of at least 25 metres and a maximum of 75 metres from the nearest extraction structure.
- b. Its diameter should range between 100 mm and 150 mm.
- c. It should be at the same depth and also tap the same aquifer zones as the pumping tube wells.
- d. It shall be fitted with a digital water level recorder with telemetry as required.
- e. A display board in Punjabi and English showing the details of the Piezometer shall be installed in the vicinity of the structure.
- f. The Piezometer shall be installed within a period of three months from the date of Permission. The telemetry system should also be functional within this period. The piezometer and telemetry equipment shall conform to the technical specifications, performance parameters and connectivity standards etc. as required by the Authority

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**CHAPTER 6****NON-COMPLIANCE CHARGES**

**6.1** Failure by a User to comply with provisions of the Directions shall make it liable to pay Non-Compliance Charges as described below without prejudice to any other liability under the Act or the Directions.

**6.2 GROUNDWATER COMPENSATION CHARGES**

The Authority may impose Non-Compliance Charges called Groundwater Compensation Charges (GCC) in addition to Other Non-Compliance Charges for the following contraventions of the Directions:

- i. Extraction of groundwater without applying for Permission in accordance with the Directions within the stipulated time period;
- ii. Extraction of groundwater after the Permission for groundwater extraction has been refused, revoked or cancelled;
- iii. Extraction of groundwater during the period when Permission for groundwater extraction has been suspended;
- iv. Extraction of groundwater after expiry of Permission.  
Provided that a User who files an application for renewal prior to expiry of Permission will not be required to pay Groundwater Compensation Charges for the period from the date of expiry of Permission to the date of renewal of the Permission. However, in case such renewal of permission is refused and the User extracts groundwater thereafter, it shall be liable to pay Groundwater Compensation Charges from the date of refusal of renewal of permission or date of expiry of permission, whichever is later.
- v. If a User granted Permission to extract groundwater, extracts a volume of groundwater in excess of the permitted volume for a period of three consecutive billing cycles, without applying for revised permission with an application complete in all respects including required fees and deposits, it shall be liable to pay Groundwater Compensation Charges for any such volume of water that it extracts in excess of the permitted volume after the last date of the third billing cycle.
- vi. If groundwater is extracted by a User without installing a water meter of the required specifications within the stipulated time period, it shall be liable to pay Groundwater Compensation Charges for the entire permitted volume of groundwater for the period of such delay.
- vii. If at any time a User has reason to believe that a water meter is defective or is not recording the volume of groundwater extracted correctly, it shall be the responsibility of the User to inform the Authority within seven days. The user shall ensure that the defect is rectified within one month of noticing such defect. In case the User informs

the Authority within the required seven days and also rectifies the defect within one month, it shall be liable to pay only the Groundwater Extraction Charges for the volume of groundwater extracted during the period for which the water meter was not working. This volume shall be assessed on the basis of groundwater extraction of the last billing cycle. In case the User delays the reporting of the defect or delays the rectifying the defect in the water meter, then Non-Compliance Charges shall be levied for the period of delay.

- viii. In the cases referred in sub-para vi, vii, above, the volume of groundwater extracted during this period shall be assessed by the Authority in a manner that provides the User an opportunity for presenting its case to the person conducting the assessment. The Groundwater Compensation Charges on the groundwater extracted during such period shall be charged on the entire volume of extraction permitted. However, in case actual extraction is assessed to be greater than the permitted volume in any of the last three months for which undisputed meter readings are available, then the Groundwater Compensation Charges will be calculated based on the extraction during such month with the highest water extraction.

**Note:** The imposition of Groundwater Compensation Charges shall be without prejudice to any other action that may be taken by the Authority under the Act or Directions with respect to a User.

### 6.3 CALCULATION OF GROUNDWATER COMPENSATION CHARGES

The Groundwater Compensation Charges (GCC) which may be imposed shall be calculated slab wise on the daily volume of water extracted in contravention of the Directions as per the Table 6.1 below for each day of contravention:

**Table 6.1:** Slab-Wise Groundwater Compensation Rates

S.no.	Status of assessment area	Volume of Water Extracted (cubic metres/day)				
		Upto10	>10-50	>50-500	>500-2500	>2500
		Compensation Rate in Rupees per cubic metre				
1	GREEN	2	8	12	20	28
2	YELLOW	4	12	18	28	36
3	ORANGE	6	16	24	36	44

**6.4 NON-COMPLIANCE OF REQUIRED SPECIFICATIONS**

- A. All machinery, equipment and instruments to be installed or used by a User for any purpose connected with groundwater extraction or conservation, including measurement and monitoring thereof, shall be in accordance with the standards and specifications set by the Authority. The User shall be bound to install all such equipment, instruments, machinery and structures as may be required by the Authority for any purpose connected with the extraction or conservation of groundwater.
- B. In the event that a User fails to comply with such standards, specifications or requirements or does not install the equipment within the time period required then it shall liable to pay Groundwater Compensation Charges described in this Chapter including Other Non-Compliance Charges.

**6.5 OTHER NON-COMPLIANCE CHARGES**

- A. The following Non-Compliance Charges (other than Groundwater Compensation Charges) for various contraventions of the Directions will be imposed as given in the Table 6.2 below. These charges are in addition to and without prejudice to the Groundwater Compensation Charges that may be levied.

**Table 6.2:** Other Non-Compliance Charges

S. No.	Item	Charges in Rs. #		
		Groundwater extracted by Unit (cubic metres per month)		
		Up to 1,500	From 1,501 to 15,000	Above 15,000
1	Failure to install required water meter in time; or failure to repair, rectify or replace faulty water meter within one month of its detection (for every month or part thereof).	10,000	20,000	50,000
2	Non-disclosure, non-sealing or unauthorised construction of groundwater extraction or water recharge (injection) structure at the time of application or thereafter: A. Each Functional Structure; B. Each Defunct or Abandoned Structure; (For every month or part thereof).	25,000 10,000	50,000 20,000	2,00,000 1,00,000
3	Unauthorised use of abandoned or non-functional extraction or recharge (injection) structure for any purpose including injection of any substance into the ground (for every month or part thereof).	25,000	50,000	2,00,000

4	Non-maintenance of water recharge or conservation structures/measures (as per water conservation scheme approved for Unit) (for every year or part thereof).	10,000	20,000	1,00,000
5	Non-submission of groundwater extraction data in time; any other violation pertaining to documentation and reporting.	5,000	10,000	50,000
6	Non-Submission of Water Audit Report in time (for every year or part thereof).	Not Applicable	25,000	1,00,000
7	Construction or excavation of groundwater extraction or recharge structure by engaging a Drilling Rig not having valid Permission (per structure).	5,000	10,000	50,000
8	Submission of false information or undertaking or failure to comply with undertaking (including undertaking related to water meters and piezometers) at the time of application or thereafter.	10,000	20,000	1,00,000
9	Operation of water tanker without valid Permission.	2,000 (for every month or part thereof)		
10	Operation of drilling rig without valid Permission.	10,000 (for every month or part thereof)		
11	Delay in payment of any Groundwater Charges	1.5% of overdue amount for every month or part thereof; to be compounded annually		

# All Charges are exclusive of GST and other taxes.

**Explanation:** If an act or omission by a User amounts to contravention of more than one of the conditions of the Directions, including conditions of Permission, then such User shall be liable to pay each and every applicable Non-Compliance Charge.

**Example: Calculation of Groundwater Compensation Charges (GCC) and delay payment charges**

Calculation of Groundwater Compensation charges to be paid by an existing Unit in Orange Zone, extracts 35,000 m<sup>3</sup> of Ground Water in a month and does not undertake any water conservation activity and applies to the Authority after 4 months 21 days from the date of commencement of Directions.

S No.	Description	Amount
1	Transition period (given to apply to Authority)	3 months (refer table 3.1)
2	Assessment area	Orange
3	Groundwater Compensation Charges to be paid for the period	51 days

4	Ground Water Charges Payable without any water conservation per month	i. Up to 300 m <sup>3</sup> = 0 ii. >300-1500 m <sup>3</sup> @ Rs. 8 x 1200 = 9600 iii. >1500-15000 m <sup>3</sup> @ Rs. 12 x 13500 = 1,62,000 iv. >15000-35000 m <sup>3</sup> @ Rs. 18 x 20000 = 3,60,000 <b>Total Rs. 5,31,600</b>
5	Per day consumption of Unit	= 35,000/30 = 1,167 m <sup>3</sup>
6	GCC charges calculation per day	i. Up to 10 m <sup>3</sup> @ 6 x 10 = 60 ii. >10-50 m <sup>3</sup> @ Rs. 16 x 40 = 640 iii. >50-500 m <sup>3</sup> @ Rs. 24 x 450 = 10,800 iv. >500-1167 m <sup>3</sup> @ Rs. 36 x 667 = 24,012 <b>Total Rs. 35,512/-</b>
7	Total GCC for 21 days	= 35,512 x 51 <b>Rs. 18,11,112/-</b>
8	Delay of Payment of three months Groundwater Charges (as per S.No. 11 of Table 6.2 above)	= 5,31,600 x 3 x (1.5 % x 2) <b>Rs. 47,844/-</b>

## 6.6 INSPECTION OF UNIT

A person authorised by the Authority may inspect a Unit at any time for the purpose of checking, determining or monitoring the compliance of the Directions. Such authorised person shall make a written note of inspection and provide a copy of the Inspection Note, at the time of inspection or within such period as required by the Authority, to the User.

Such authorised person may also inspect and obtain copies of any documents, records, digital files, data in electronic format etc. required for the purpose of checking or monitoring the compliance of the Directions, and it shall be the responsibility of the User to provide all such documents, records, information and files without delay.

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## CHAPTER 7

### WATER AUDIT

**7.1** Water audit is a systematic process of objectively obtaining a water balance of the Unit by measuring flow of water from the source of water withdrawal or treatment, through the distribution system, and into areas where it is used, treated and finally discharged or re-used.

a. Objectives of Water Audit

Conducting a water audit involves calculating the existing water use and water balance, and then identifying and prioritising the options for saving water so as to achieve an improved water balance within a defined time period.

A detailed description of the current and the achievable water balance is an important deliverable of the Water Audit Report. This includes assessing the water quantity and quality at various user points which are mapped to assist in developing reduction, recycle and reuse opportunities.

b. Activities during Water Audit

A preliminary water survey will be conducted to collect information regarding the Unit's activities, water consumption, water quality, water treatment, water discharge and re-use pattern and water billing rates.

Secondary data will be collected from the industry or similar Units to assess and evaluate good practices, feasible technologies and economically viable options.

After the analysis of this secondary data a detailed water audit of the Unit shall be conducted, including the following steps:

- On-site briefing and discussion with facility manager and personnel;
- Analysis of water system and each water sub-system in the Unit;
- Preparation and Quantification of Baseline Water Map;
- Measurement of water flows and water quality using water meters and other devices and water quality tests by NABL-accredited laboratories for all relevant parameters;
- Identification and Quantification of water inefficiencies including leakages;
- Quantification of loads and discharges;
- Quantification of variability in flows and in water quality parameters;
- Targets and Strategies for improving water use productivity, economising water use, improving water treatment and reuse;

- Prioritising options based on cost-benefit analysis and defining time lines for actionable points.

c. The Water Audit Report should contain the following:

- Water consumption and wastewater generation pattern
- Specific water usage, quality, treatment and conservation issues
- Complete water balance of the Unit
- Water saving opportunities
- Comparison of the technologies and practices of the Unit with best technology and best practices for water use of the industry
- Recommendations, short term and long term, for achieving improved water balance, based on priorities determined through cost-benefit analysis of options;
- Methods, costs, benefits and timelines for implementing the recommendations
- Investments in new machinery, equipment, processes, skills, and technologies required to achieve recommendations within agreed time periods
- Detailed description and analysis including data, tables and figures.

**7.2** A Unit that has been granted permission to extract more than 3,000 cubic metres per month of groundwater shall be required to undertake a Water Audit as per the following time schedule:

(1) A Unit permitted to extract between 3,000 cubic metres month and 15,000 cubic metres per month will submit a Water Audit Report once every five years from the date of grant of permission.

(2) A Unit permitted to extract groundwater above 15,000 cubic metres per month will submit a Water Audit Report once every three years from the date of grant of permission. The Unit shall engage for this purpose any one of the Water Auditors empanelled by the Authority.

**7.3** The Water Auditor shall obtain the comments of the User as regards the contents of the Report and in particular as regards implementing in a time-bound manner the recommendations contained in the Report. The Water Auditor shall specifically mention such of the recommendations that the User has agreed to implement within a definite time period along with an action plan for the same.

**7.4** The Report shall be submitted by the User to the Authority after it is completed and signed by the Water Auditor. The Authority may monitor and review the activities of the User for ensuring compliance with the agreed time-bound action plan contained in the Report, and may issue directions in this regard to the User.

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**CHAPTER-8****AD-INTERIM PERMISSIONS**

- 8.1.** A User who had obtained granted ad-interim permission under the Draft Guidelines shall apply for permission under the Directions within the time period stipulated for existing Units.
- 8.2.** A User who had obtained ad-interim permission under the Draft Guidelines shall pay Groundwater Extraction charges from the date it had submitted its application or from the date of extraction, whichever is later, as per the charges in the Draft Guidelines, up to the commencement of the Directions as the ad-interim permission will come to an end with the commencement of the Directions.
- 8.3.** Such User shall pay the groundwater charges contained in the Directions from the date of commencement of the Directions.
- 8.4.** The Security Deposit of such User will be re-calculated as per the Directions.
- 8.5.** A User granted ad-interim Permission for a Unit which is now exempted from paying Charges under the Directions (e.g. a Unit extracting up to 300 cubic metres per month) may seek refund of the Security Deposit which may be returned to the User after settling all accounts.
- 8.6.** A User who has already paid the registration fee for extraction structures while applying for ad-interim permission under the Draft Guidelines, shall not be required to pay such fee again for the same structures while applying under the Directions. However, no refund shall be applicable in case of any difference in registration fees.
- 8.7.** A User who has applied for ad-interim permission and has paid the application fee for the same, shall be exempted from payment of application fee for the same Unit under the Directions in case the volume of groundwater extraction for which permission is sought does not fall in a higher slab.

**CHAPTER-9****PETITIONS TO AUTHORITY AND REMOVAL OF DIFFICULTIES****9.1 PETITION BY AFFECTED PERSON**

A person affected by an Order under the Directions may file a petition before the Authority within 60 Days of such Order, in accordance with the provisions of the Punjab Water Regulation and Development Authority (Conduct of Business) Regulations, 2021.

**9.2 REMOVAL OF DIFFICULTIES**

If any difficulty arises in giving effect to any of the provisions of the Directions, the Authority may by general or special order, do anything not being inconsistent with the provisions of the Act which appears to it to be necessary or expedient for the purpose of removing such difficulty.

**9.3 INTERPRETATION AND REMOVAL OF DOUBTS**

The Authority may, from time to time, issue such clarifications, explanations, illustrations, examples and notes etc. as it may deem fit for the purpose of interpreting any of the provisions contained in the Direction, and for the removal of any doubts as regards the meaning, import and consequences of such provisions.

**ANNEXURE 1****GROUND WATER RESOURCE ASSESSMENT**

The Government of India and Government of Punjab have been jointly assessing the groundwater status of Punjab periodically. The latest assessment of Ground Water Resources of Punjab has been published in the Report “Ground Water Resources of Punjab State (As on 31<sup>st</sup> March 2022) December 2022 by Ground Water Management Circle, Water Resources Department, Punjab and the Central Ground Water Board, North Western Region, Chandigarh. (hereinafter the Report).

As per the Report, the categorisation of assessment areas (blocks) is defined by the Stage of Ground Water Extraction as given below:

**Table A 1: Stage of Ground Water Extraction**

Stage of Ground Water Extraction (%)	Category
$\leq 70$	Safe
$> 70 \text{ and } \leq 90$	Semi-Critical
$> 90 \text{ and } \leq 100$	Critical
$> 100\%$	Over-Exploited

The Stage of ground water extraction and categorisation of assessment areas (blocks) in the Report is based only on the *Dynamic* Ground Water Resources. In other words, the assessment in the Report does not consider the *Static* Ground Water Resources or water resources contained in the deeper aquifers.

The abstract of Dynamic Ground Water Assessment for the year 2022 for Punjab is given in the Report as follows:

**Table A-2:** Data on Dynamic Water Resources of Punjab, 2022

<b>Groundwater Resource</b>	<b>Billion Cubic Metres</b>	<b>Million Acre Feet</b>
Net Annual Groundwater Availability	17.07	13.83
Existing Groundwater Draft for Irrigation	26.69	21.62
Existing Groundwater Draft for Domestic, and Industrial Use	1.32	1.08
Existing Groundwater Draft for All Uses	28.01	22.70
Net Ground Water Availability for future Irrigation Development in Safe, Semi-critical, Critical and potential resource in water-logged areas	1.56	1.27
Average Stage of Groundwater Extraction of State (%)	164 %	

The number of Assessment Areas (Blocks) falling in various categories in the year 2022 as per the Report is as follows:

**TableA-3:** Data on Number of Blocks in Various Categories

<b>Total Blocks</b>	<b>153*</b>
Over-Exploited Blocks	117*
Critical Blocks	04
Semi-Critical Blocks	15
Safe Blocks	17

*\*Includes 3 Urban areas- Amritsar City, Jalandhar city & Ludhiana city- all 3 are in over-exploited category*

In the Directions the categorisation of Assessment Areas (Blocks) contained in the Report has been adopted. In addition, for better management and conservation of groundwater resources the Assessment Areas (Blocks) have been assigned a Status i.e., Orange, Yellow and Green. This Status has been considered

while fixing Groundwater Charges under the Directions for each Assessment Areas (Blocks). The Status is based on the stage of groundwater extraction contained in the Report.

The Over-exploited Blocks/Assessment Areas with a stage of ground water development of 200% or more have been designated as "**ORANGE**". These are 63 in number. These would need most immediate and urgent attention for management and conservation of ground water.

The Over-exploited Blocks/Assessment Areas numbering 53, with a stage of ground water development more than 100% and up to 199% have been designated as "**YELLOW**". These need appropriate management and water conservation measures on an urgent basis.

The 37 Blocks/Assessment Areas with a stage of ground water development falling in the three categories of Critical, Semi-critical and Safe as per the Report have been designated as "**GREEN**" and need appropriate water management measures so that ground water conditions remain sustainable in the long run.

Consequently, the number of Assessment Areas (Blocks) in each Status is as follows.

**Table A-4:** Number of Assessment Areas (Blocks) by Status

Category as per Report (2022)	Status	Number of Assessment Areas (Blocks)
Safe, Semi Critical, Critical	Green	37
Over-exploited (up to 199%)	Yellow	53
Over-exploited (200% and above)	Orange	63

Accordingly, the categorization of Assessment Areas (Blocks) contained in the 2022 Report titled "Ground Water Resources of Punjab State (As on 31<sup>st</sup> March 2022)" is as follows:

**Table A-5:** Category and Corresponding Status of Assessment Areas (Blocks)

Sr. No.	District	Assessment Areas (Blocks)	Stage of Ground Water Extraction (%) as on 31.03.2022	Category	Status
1.	AMRITSAR	AJNALA	157	OVER-EXPLOITED	YELLOW
2.	AMRITSAR	ATTARI	185	OVER-EXPLOITED	YELLOW
3.	AMRITSAR	AMRITSAR CITY (URBAN)	324	OVER-EXPLOITED	ORANGE
4.	AMRITSAR	CHOGAWAN	145	OVER-EXPLOITED	YELLOW
5.	AMRITSAR	HARSHA CHINA	186	OVER-EXPLOITED	YELLOW
6.	AMRITSAR	JANDIALAGURU	238	OVER-EXPLOITED	ORANGE
7.	AMRITSAR	MAJITHA	157	OVER-EXPLOITED	YELLOW
8.	AMRITSAR	RAYYA	187	OVER-EXPLOITED	YELLOW
9.	AMRITSAR	TARSIKA	202	OVER-EXPLOITED	ORANGE
10.	AMRITSAR	VERKA	242	OVER-EXPLOITED	ORANGE
11.	BARNALA	BARNALA	320	OVER-EXPLOITED	ORANGE
12.	BARNALA	MAHAL KALAN	117	OVER-EXPLOITED	YELLOW
13.	BARNALA	SEHNA	211	OVER-EXPLOITED	ORANGE
14.	BATHINDA	BATHINDA	126	OVER-EXPLOITED	YELLOW
15.	BATHINDA	BHAGTA BHAI KA	345	OVER-EXPLOITED	ORANGE
16.	BATHINDA	GONIANA MANDI	219	OVER-EXPLOITED	ORANGE
17.	BATHINDA	MAUR	179	OVER-EXPLOITED	YELLOW
18.	BATHINDA	NATHANA	118	OVER-EXPLOITED	YELLOW
19.	BATHINDA	PHUL	135	OVER-EXPLOITED	YELLOW
20.	BATHINDA	RAMPURA	78	SEMI-CRITICAL	GREEN
21.	BATHINDA	SANGAT	72	SEMI-CRITICAL	GREEN
22.	BATHINDA	TALWANDI SABOO	75	SEMI-CRITICAL	GREEN
23.	FARIDKOT	FARIDKOT	144	OVER-EXPLOITED	YELLOW
24.	FARIDKOT	JAITON	188	OVER-EXPLOITED	YELLOW
25.	FARIDKOT	KOT KAPURA	125	OVER-EXPLOITED	YELLOW
26.	FATEHGARH SAHIB	AMLOH	248	OVER-EXPLOITED	ORANGE

27.	FATEHGARH SAHIB	BASSI PATHANA	248	OVER-EXPLOITED	ORANGE
28.	FATEHGARH SAHIB	KHAMANON	170	OVER-EXPLOITED	YELLOW
29.	FATEHGARH SAHIB	KHERA	198	OVER-EXPLOITED	YELLOW
30.	FATEHGARH SAHIB	SIRHIND	199	OVER-EXPLOITED	YELLOW
31.	FAZILKA	ABOHAR	17	SAFE	GREEN
32.	FAZILKA	ARNIWALA SHEIKH SUBANPUR	81	SEMI-CRITICAL	GREEN
33.	FAZILKA	FAZILKA	34	SAFE	GREEN
34.	FAZILKA	JALALABAD	182	OVER-EXPLOITED	YELLOW
35.	FAZILKA	KHUYIAN SARWAR	61	SAFE	GREEN
36.	FEROZPUR	FEROZPUR	113	OVER-EXPLOITED	YELLOW
37.	FEROZPUR	GHALL KHURD	139	OVER-EXPLOITED	YELLOW
38.	FEROZPUR	GURU HAR SAHAI	103	OVER-EXPLOITED	YELLOW
39.	FEROZPUR	MAKHU	99	CRITICAL	GREEN
40.	FEROZPUR	MAMDOT	195	OVER-EXPLOITED	YELLOW
41.	FEROZPUR	ZIRA	270	OVER-EXPLOITED	ORANGE
42.	GURDASPUR	BATALA	167	OVER-EXPLOITED	YELLOW
43.	GURDASPUR	DERA BABA NANAK	182	OVER-EXPLOITED	YELLOW
44.	GURDASPUR	DHARIWAL	167	OVER-EXPLOITED	YELLOW
45.	GURDASPUR	DINA NAGAR	86	SEMI-CRITICAL	GREEN
46.	GURDASPUR	DORANGALA	87	SEMI-CRITICAL	GREEN
47.	GURDASPUR	FATEHGARH CHURIAN	167	OVER-EXPLOITED	YELLOW
48.	GURDASPUR	GURDASPUR	109	OVER-EXPLOITED	YELLOW
49.	GURDASPUR	KAHNUWAN	134	OVER-EXPLOITED	YELLOW
50.	GURDASPUR	KALANAUR	184	OVER-EXPLOITED	YELLOW
51.	GURDASPUR	QADIAN	103	OVER-EXPLOITED	YELLOW
52.	GURDASPUR	SRI HARGOBINDPUR	98	CRITICAL	GREEN
53.	HOSHIARPUR	BHUNGA	76	SEMI-CRITICAL	GREEN
54.	HOSHIARPUR	DASUYA	143	OVER-EXPLOITED	YELLOW
55.	HOSHIARPUR	GARHSHANKAR	178	OVER-EXPLOITED	YELLOW
56.	HOSHIARPUR	HAZIPUR	64	SAFE	GREEN
57.	HOSHIARPUR	HOSHIARPUR-I	166	OVER-EXPLOITED	YELLOW
58.	HOSHIARPUR	HOSHIARPUR-II	81	SEMI-CRITICAL	GREEN
59.	HOSHIARPUR	MAHILPUR	90	SEMI-CRITICAL	GREEN
60.	HOSHIARPUR	MUKERIAN	90	SEMI-CRITICAL	GREEN
61.	HOSHIARPUR	TALWARA	34	SAFE	GREEN
62.	HOSHIARPUR	TANDA	158	OVER-EXPLOITED	YELLOW

63.	JALANDHAR	ADAMPUR	213	OVER-EXPLOITED	ORANGE
64.	JALANDHAR	BHOGPUR	203	OVER-EXPLOITED	ORANGE
65.	JALANDHAR	JALANDHAR CITY (URBAN)	305	OVER-EXPLOITED	ORANGE
66.	JALANDHAR	JALANDHAR-EAST	400	OVER-EXPLOITED	ORANGE
67.	JALANDHAR	JALANDHAR-WEST	243	OVER-EXPLOITED	ORANGE
68.	JALANDHAR	LOHIAN	247	OVER-EXPLOITED	ORANGE
69.	JALANDHAR	MEHATPUR	273	OVER-EXPLOITED	ORANGE
70.	JALANDHAR	NAKODAR	313	OVER-EXPLOITED	ORANGE
71.	JALANDHAR	NUR MAHAL	199	OVER-EXPLOITED	YELLOW
72.	JALANDHAR	PHILLAUR	259	OVER-EXPLOITED	ORANGE
73.	JALANDHAR	RURKA KALAN	241	OVER-EXPLOITED	ORANGE
74.	JALANDHAR	SHAHKOT	344	OVER-EXPLOITED	ORANGE
75.	KAPURTHALA	DHILWAN	177	OVER-EXPLOITED	YELLOW
76.	KAPURTHALA	KAPURTHALA	286	OVER-EXPLOITED	ORANGE
77.	KAPURTHALA	NADALA	189	OVER-EXPLOITED	YELLOW
78.	KAPURTHALA	PHAGWARA	265	OVER-EXPLOITED	ORANGE
79.	KAPURTHALA	SULTANPUR LODHI	249	OVER-EXPLOITED	ORANGE
80.	LUDHIANA	DEHLON	237	OVER-EXPLOITED	ORANGE
81.	LUDHIANA	DORAHA	142	OVER-EXPLOITED	YELLOW
82.	LUDHIANA	JAGRAON	157	OVER-EXPLOITED	YELLOW
83.	LUDHIANA	KHANNA	297	OVER-EXPLOITED	ORANGE
84.	LUDHIANA	LUDHIANA-I	353	OVER-EXPLOITED	ORANGE
85.	LUDHIANA	LUDHIANA-II	216	OVER-EXPLOITED	ORANGE
86.	LUDHIANA	LUDHIANA CITY (URBAN)	426	OVER-EXPLOITED	ORANGE
87.	LUDHIANA	MACHHIWARA	153	OVER-EXPLOITED	YELLOW
88.	LUDHIANA	MALoud	199	OVER-EXPLOITED	YELLOW
89.	LUDHIANA	PAKHOWAL	273	OVER-EXPLOITED	ORANGE
90.	LUDHIANA	RAIKOT	282	OVER-EXPLOITED	ORANGE
91.	LUDHIANA	SAMRALA	234	OVER-EXPLOITED	ORANGE
92.	LUDHIANA	SIDHWAN BET	251	OVER-EXPLOITED	ORANGE
93.	LUDHIANA	SUDHAR	237	OVER-EXPLOITED	ORANGE
94.	MALER KOTLA	MALER KOTLA-I	308	OVER-EXPLOITED	ORANGE
95.	MALER KOTLA	MALER KOTLA-II	298	OVER-EXPLOITED	ORANGE
96.	MANSA	BHIKHI	215	OVER-EXPLOITED	ORANGE
97.	MANSA	BUDHLADA	100	CRITICAL	GREEN
98.	MANSA	JHUNIR	48	SAFE	GREEN

99.	MANSA	MANSA	170	OVER-EXPLOITED	YELLOW
100.	MANSA	SARDULGARH	88	SEMI-CRITICAL	GREEN
101.	MOGA	BAGHA PURANA	209	OVER-EXPLOITED	ORANGE
102.	MOGA	DHARAMKOT (KOT ISA KHAN)	159	OVER-EXPLOITED	YELLOW
103.	MOGA	MOGA I	333	OVER-EXPLOITED	ORANGE
104.	MOGA	MOGA II	344	OVER-EXPLOITED	ORANGE
105.	MOGA	NIHAL SINGH WALA	331	OVER-EXPLOITED	ORANGE
106.	MUKTSAR	GIDDERBAHA/ (KOT BHAI)	38	SAFE	GREEN
107.	MUKTSAR	LAMBI	20	SAFE	GREEN
108.	MUKTSAR	MALOUT	34	SAFE	GREEN
109.	MUKTSAR	MUKTSAR	19	SAFE	GREEN
110.	NAWAN SHAHR	AUR	115	OVER-EXPLOITED	YELLOW
111.	NAWAN SHAHR	BALACHAUR	90	SEMI-CRITICAL	GREEN
112.	NAWAN SHAHR	BANGA	203	OVER-EXPLOITED	ORANGE
113.	NAWAN SHAHR	NAWAN SHAHR	145	OVER-EXPLOITED	YELLOW
114.	NAWAN SHAHR	SAROYA	59	SAFE	GREEN
115.	PATHANKOT	BAMYAL	82	SEMI-CRITICAL	GREEN
116.	PATHANKOT	DHAR KALAN	27	SAFE	GREEN
117.	PATHANKOT	GHAROTA	71	SEMI-CRITICAL	GREEN
118.	PATHANKOT	NAROT JAIMAL SINGH	77	SEMI-CRITICAL	GREEN
119.	PATHANKOT	PATHANKOT	56	SAFE	GREEN
120.	PATHANKOT	SUJANPUR	35	SAFE	GREEN
121.	PATIALA	BHUNER HERI	282	OVER-EXPLOITED	ORANGE
122.	PATIALA	GHANAUR	100	CRITICAL	GREEN
123.	PATIALA	NABHA	214	OVER-EXPLOITED	ORANGE
124.	PATIALA	PATIALA	196	OVER-EXPLOITED	YELLOW
125.	PATIALA	PATRAN	286	OVER-EXPLOITED	ORANGE
126.	PATIALA	RAJPURA	201	OVER-EXPLOITED	ORANGE
127.	PATIALA	SAMANA	189	OVER-EXPLOITED	YELLOW
128.	PATIALA	SANAUR	237	OVER-EXPLOITED	ORANGE
129.	PATIALA	SHAMBHU KALAN	245	OVER-EXPLOITED	ORANGE
130.	ROPAR	ANANDPUR SAHIB	76	SEMI-CRITICAL	GREEN
131.	ROPAR	CHAMKAUR SAHIB	130	OVER-EXPLOITED	YELLOW
132.	ROPAR	MORINDA	159	OVER-EXPLOITED	YELLOW
133.	ROPAR	NURPUR BEDI	69	SAFE	GREEN
134.	ROPAR	ROPAR	65	SAFE	GREEN

135.	S.A.S. NAGAR	DERA BASSI	163	OVER-EXPLOITED	YELLOW
136.	S.A.S. NAGAR	KHARAR	115	OVER-EXPLOITED	YELLOW
137.	S.A.S. NAGAR	MAJRI	65	SAFE	GREEN
138.	SANGRUR	ANDANA	251	OVER-EXPLOITED	ORANGE
139.	SANGRUR	BHAWANIGARH	348	OVER-EXPLOITED	ORANGE
140.	SANGRUR	DHURI	344	OVER-EXPLOITED	ORANGE
141.	SANGRUR	DIRBA	342	OVER-EXPLOITED	ORANGE
142.	SANGRUR	LEHRAGHAGA	277	OVER-EXPLOITED	ORANGE
143.	SANGRUR	SANGRUR	310	OVER-EXPLOITED	ORANGE
144.	SANGRUR	SHERPUR	286	OVER-EXPLOITED	ORANGE
145.	SANGRUR	SUNAM	341	OVER-EXPLOITED	ORANGE
146.	TARN TARAN	BHIKHIWIND	219	OVER-EXPLOITED	ORANGE
147.	TARN TARAN	CHOLA SAHIB	247	OVER-EXPLOITED	ORANGE
148.	TARN TARAN	GANDIWIND TATLA	124	OVER-EXPLOITED	YELLOW
149.	TARN TARAN	KHADUR SAHIB	223	OVER-EXPLOITED	ORANGE
150.	TARN TARAN	NAUSHEHRA PANUAN	257	OVER-EXPLOITED	ORANGE
151.	TARN TARAN	PATTI	236	OVER-EXPLOITED	ORANGE
152.	TARN TARAN	TARN TARAN	241	OVER-EXPLOITED	ORANGE
153.	TARN TARAN	VALTOHA	166	OVER-EXPLOITED	YELLOW

Chandigarh  
The 27th January, 2023

Sd/-  
**(J.K. JAIN)**  
Secretary  
Punjab Water Regulation and  
Development Authority